Amendment
Serial No. 09/843,499

## REMARKS

Entry of this Amendment and reconsideration are respectfully requested in view of the amendments made to the claims and for the remarks made herein.

Claims 1-20 are pending and stand rejected. Claims 1, 7, 12, and 15 are independent claims.

Claims 1-6 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nafeh (USP no. 5,343,251) in view of Walker (USP no. 6,928,233) and further in view of Foote (USP no. 6,751,354).

Nafeh and Walker are referred to in rejecting the claims in the prior Office Action and have been addressed in applicant's response to the rejection of the claims in the prior Office Action. Applicant's remarks regarding Nafeh and Walker are reasserted, as if in full, herein.

Foote teaches a technique for classifying video frames using statistical models of transform coefficients, wherein image frames are transformed using a discrete cosine transform or Hadamard transform. Feature vectors of training images for image classes are classified by the maximum likelihood resulting from the image class statistical models. Thus, the probabilities that a feature vector derived from a frame would be produced from each of the image class statistical model are computed. The frame is classified into the image class corresponding to the image class statistical model which produced the highest probability for the feature vector derived from the frame. (see Abstract).

The Office Action refers to col. 36, lines 30+ for teaching the claim element found to be deficient in the teaching of Nafeh and Walker as recited in applicant's remarks made in response to the prior Office Action.

However, contrary to the statements made in the instant Office Action, a reading of the referred to section of Foote fails to disclose the claim element found to be deficient in the teaching of Nafeh and Walker. More specifically, Foote teaches determining an image class probability for a d-entry feature vector for each of a plurality of s video image classes. The video frame is then classified into one of the video image classes based on the maximum of the determined image class probabilities.

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However, Foote fails to disclose "combining the probability distribution for each sub-segment by averaging the probability distribution for each sub-segment to form a combined probability distribution." Rather, Foote merely discloses computing a probability distribution and selecting the maximum probability.

It should be noted that Foote discloses averaging values (see, for example, "FIG. 17 demonstrates how a Gaussian model is used for classifying and segmenting video. Experiments on a corpus of staff meeting videos has shown that classes such as slides, speaker, and crowd are accurately recognized. MPEG-1 frames taken at 1/2-second intervals were decoded and reduced to 64.times.64 grayscale intensity sub-images. The resulting frame images were discrete cosine transform and Hadamard transform coded and the 100 coefficients with the highest average magnitude were selected as features. A diagonal-covariance Gaussian model was trained on 80 example slide frames and used to compute the probability of slide frames and titles in the unrelated test video."). However, the averaging disclosed by Foote is with regard to determining the characteristics of the feature vectors and not with regard to the probabilities that are determined based on the feature vectors.

A claimed invention is prima facie obvious when three basic criteria are met. First, there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings therein. Second, there must be a reasonable expectation of success. And, third, the prior art reference or combined references must teach or suggest all the claim limitations.

As the combination of Nafeh, Walker and Foote fails to disclose all the elements claimed, the invention recited in claim 1 is not rendered obvious by the teachings of the cited references.

For at least this reason, applicant submits that the reason for the rejection has been overcome and can no longer be sustained. Applicant respectfully requests withdrawal of the rejection and allowance of the claim.

With regard to the remaining claims, these claims are dependent from independent claim 1 discussed above and are therefore believed patentable for the same

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reasons. For at least this reason, applicant respectfully requests withdrawal of the rejection and allowance of the claim.

Claims 7-20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nafeh in view of Walker and further in view of Foote (USP no. 6,751,354) and further in view of Maeda (US 6,580,679).

Applicant respectfully disagrees with and explicitly traverses the reason for rejecting the claims for the same arguments made in response to the rejection of the claims found in the prior Office Action. Nafeh, Walker and Maeda are referred to in rejecting the claims in the prior Office Action and have been addressed in applicant's response to the rejection of the claims, which are reasserted, as if in full, herein.

With regard to independent claims 7, 12 and 15, these claims recite subject matter similar to that recited in claim 1. As shown above, Foote fails to disclose any teaching regarding the claim element " combining the probability distribution for each sub-segment by averaging the probability distribution for each sub-segment to form a combined probability distribution."

Thus, for the remarks made in response to the rejection of claim 1, above, which are also applicable with regard to the rejection of claims 7, 12, and 15, which are reasserted, as if in full, in response to the rejection of the these claims, applicant submits that the reason for the rejection has been overcome and respectfully requests withdrawal of the rejection.

With regard to the remaining claims, these claims are each dependent from one of the independent claims discussed above and are, therefore, believed allowable and patentable for the same reasons.
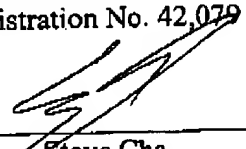
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For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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